





BY THE SENATE,
JANUARY 20th, 1880.

Ordered, that 1,000 copies be printed for the use of the Senate.

By order,
EUGENE HIGGINS,
Secretary.

REPORT

OF THE

COMMISSIONERS OF MINES,

TO THE

GOVERNOR OF MARYLAND,

SUBMITTED BY

WM. H. SMITH, CHAS. H. HAMILL, JOHN RYAN, Commissioners.

ANNAPOLIS:

WILLIAM T. IGLEHART & CO., STATE PRINTERS.

1880.

Digitized by the Internet Archive
in 2010 with funding from
Lyrasis Members and Sloan Foundation

To His Excellency, WILLIAM T. HAMILTON,

Governor of Maryland.

SIR:—The Legislature of Maryland, at the January Session of 1878, Chapter 157, Section 15, authorized the appointment of three competent persons to examine the mines of Alleghany and Garrett Counties, and report before the next Session of the General Assembly, with recommendation for such legislation as to said commission may appear just and necessary for the proper supervision and regulation of said mines.

We had the honor to receive the appointment by commission bearing date the twenty-second day of May, 1879, and early in July of said year we entered actively upon the discharge of our duties, in first making a thorough personal examination of the workings and ventilation of said mines. The weather being very warm, damp, close and rainy, gave as full a test to the system of ventilation as applied in said mines, as could be desired.

We are gratified to report that the mine Superintendents, master miners and inside overseers in charge of the working and ventilation of the mines, are men of high character and intelligence, and of long experience in their several departments, and fully alive to the responsibility of keeping a full supply of fresh air in the mines for the health and safety of the men employed therein. The thoroughness of the examination and its important results will be seen by reference to the Journal Appendix.

The system of mining has very greatly improved since 1854, effecting a very great saving of coal; there is still too much irregularity in the different mines, which can be corrected by making a thorough instrumental survey of

the coal basin, and with the aid of a complete and correct map. The grade of Master miners at present in charge of the mines, in conference with a competent mining Engineer, would make still further improvement, with benefit to the Coal Companies and State.

The second question that came under the notice of the Commission was that of the weight of coal mined and shipped, in order to ascertain if all the Companies had in good faith allowed to the miners full weight or quantity of coal mined, as provided in Section 12, which gives full authority to the inspector to test the accuracy of weights in any manner he may see proper ; the Commission claimed the same power ; a fair comparison of the mining sales and shipping journal would have at once solved the question, but to the surprise of the Commission, all information of the actual amount of coal shipped was refused, so that no correct or satisfactory conclusion could be reached. /

The custom of the Companies is to manifest the coal according to the capacity marked on each car, and that manifest goes to the transportation Companies, the Rail Road and Canal. That manifest was offered to the Commission, but having reliable information that said manifest did not contain the actual quantity of coal shipped, as every car was made to contain from one to two thousand pounds more than the real carrying capacity marked on it, which was only included in a private manifest sent to the Company or their Agents.

The Cumberland and Pennsylvania Rail Roads are now weighing all coal passing over their road ; carefully protecting the interest of their road in all weight, and in their collection of freight, two bills are made out, one for the open manifest, and the other private for the over-weight of coal. Failing to get from the Companies the actual quantity of coal shipped since the mining law went into effect, the Commission made application to the Superintendent of said Roads, but under instructions of the President all information outside of the open manifest weights

was refused, as they could not expose the private business of their shippers. The weekly, monthly and annual published statements of the coal statistics by the Rail Road Companies does not show the true condition of the trade. The Commission had reliable information that some of the Companies exacted over-weight from their mines, but in consequence of a refusal of the Companies to give the information necessary to solve the question, we had to abandon it. This practice of not keeping open manifests of the actual quantity of coal shipped is irregular and unfair, and very injurious to the entire coal trade; it unsettles and destroys confidence, and prevents harmony among the operators; it engenders bad and hostile feeling on the part of the men, leading to strikes whenever an opportunity offers for retaliation, resulting in loss to the legitimate operator, the transportation Companies, the Manufacturer, Merchant and to the Miner himself; confidence is necessary to the legitimate and harmonious success of all business, and in order, as far as possible, to secure this in the coal trade, we suggest that the Legislature require all the coal Companies to weigh and manifest correctly all coal shipped, and to furnish to the transportation Companies correct lists or manifests of such shipments, and that the transportation Companies should weigh carefully all coal loaded on their cars at the mines, and to furnish for publication such correct lists of coal shipments, and to deliver at its destination all coal receipted for, less a fair per cent. allowed for waste.

In order to elevate the miners as a class, and to give the strong conservative men strength to counteract the evil influence of secret associations, we suggest that an act of incorporation for a Miners Association be passed, placing them on the same high ground as all other incorporated bodies, with full power to arrange and settle all questions between them and the coal operators, including that of the price for mining coal; requiring the coal operators and transportation Companies to furnish correct lists of quanti-

ties of coal shipped, to the President or Secretary of said Miner's Association, affording proof of good faith on the part of the operators in giving full weight of the coal mined. If an Association of this character were properly encouraged on the part of the Companies and endorsed by public sentiment, the destructive effects of secret societies would be controlled and defeated.

In order to secure a harmonious working of the coal operators and miners, we suggest the propriety of a fixed minimum price for mining, with a sliding scale of fixed per centage on any advance of coal at George'town, beyond the cost of delivery, including in said cost a fair and legitimate profit for Royalty, Taxes, Interest on Capital invested in lands and improvements necessary for a coal business.

The Commission, after very mature examination and reflection, have failed to see any good effects either to the miner or to the true interest of the State by the appointment of a mine Inspector, and can see no good to result from its continuance, and therefore recommend the repeal of the Law, except so much of Sections 12 and 13 as applies to the correct weight of coal,—Section 10, of said Act, relating to props, has been tested in the Courts and set aside as interfering with the right of private contract; if the construction of that Section claimed by the miners had been endorsed by the opinion of the Courts, it would have undoubtedly interfered with the proper control and working of the mines by the Companies' agents, and seriously affected the investment of capital in coal lands.

The Cumberland Coal basin extends from the Pennsylvania state line across Alleghany and Garrett Counties of Maryland and into Virginia, its general bearing is South thirty-four degrees West. It lies in a trough between Dans Mountain on the South East and the Great Savage on the North West. The general width of the Basin is five miles and its length is (30) thirty miles, containing one hundred and fifty (150) square miles of coal measures.

The trough is closed up at the North end by a transverse ridge connecting the two mountains on which the town of Frostburg stands eighteen hundred feet above tide water.

On the North of Frostburg, Jennings Run takes its rise, cutting both longitudinally and transversely some six miles through the coal formation, then turning south and emptying into Will's Creek some three (3) miles above Cumberland.

On the East of Frostburg, Braddock's Run rises and passes through Dans Mountain by a very deep and narrow gorge, emptying into Will's Creek at the head of the narrows.

On the south of Frostburg, George's Creek rises and flows through the coal Basin near the line of the cynclinal axes for a distance of sixteen miles to the Town of Westernport emptying into the Potomac river.

The Potomac River cuts through the coal Basin some two (2) miles transversely, and then flows southwardly near the cynclinal axes for a distance of ten or fifteen miles.

The coal measures of this Basin are computed to be fifteen hundred (1500) feet thick, consisting of strata of shale, sandstone, limestone, iron-ore, fire clay and veins of coal, succeeding each other in layers of different thicknesses. The base of this formation is a strata of very thick beds of white sandstone or conglomerate, capping the top of Dan and Savage Mountain, sloping very deep beneath the streams cutting through the coal measures.

The surface of the Basin is of course very irregular, being intercepted by very deep ravines formed by the mountain streams and rivers traversing it. The (14) fourteen foot vein of coal lying high up on the range of hills and spars making out from the mountains is, in consequence of the great denudation from the streams and rivers, of very limited extent and does not to day exceed nine thousand acres in the George's Creek Valley and one thousand acres in the Elk Garden Settlement in Virginia.

The idea that has prevailed in the public mind that this big vein was inexhaustible, has led to very great waste, both in the mining and sale of it, being sold greatly below its true value. There is still very great waste of this coal under the destructive rivalry between the different coal operators in this region, and the very close and unhealthy competition with the Clearfield coal, the crop coal is sacrificed; the bench coal 2 feet thick, equal in commercial value to either the Saulsbury or Clearfield coal, is left untouched in the mines; none but the best coal and very choicest is mined and shipped to market, thousands of tons are thus lost to the companies and to the State.

The fourteen feet vein is a very pure coal, containing 80 per cent. of fixed carbon, very regular, without any faults or troubles, is perfectly clear of all noxious gasses of every kind. The Black Damp or Carbonic Acid Gas is in the measures above the fourteen foot vein and only finds its way into the rooms or chambers of the workings, on the falling in of the roof caused by the removal of the props and by the robbing of the pillars which had been left standing for the protection of the miner in the progress of working out a square of coal. The square being finished, the props and pillars of coal are then taken out in order to secure all the coal possible; if the atmosphere outside is close and damp, some few hours are required to expel the gas. If, on the contrary the atmosphere is dry and bracing, little or no inconvenience is felt. All the miners have made ample provision either by natural drafts of air or have erected furnaces to secure good and healthy ventilation. This coal is very easily mined or rather dug, any ordinary man of intelligence in a fair day's work of (8) eight hours can mine from five to six tons, while in many cases eight or ten tons have been sent out by skillful miners.

The accidents in these mines are in a great measure due to the carelessness of the men in moving about in the mines, and the neglect of the miner to set up his props at the proper time to secure safety, on account of his eagerness to

send out all the coal possible upon the receipt of a barge order at the mine. Many more accidents would occur but for the constant vigilance of the master miner and his assistants in their daily rounds of the mines.

There is no coal region in the world where the coal veins are so regular and so safely and easily mined and where such ample provision is made by the company for the comfort of their employees. They all have comfortable homes with gardens attached, and with proper economy of time on the part of the miner all the comforts of life could be had in the cultivation of vegetables, grapes, pears and small fruits. Churches of almost every denomination are open for worship. The State has made ample provision for the education of their children, and if they fail to secure prosperity and happiness, it is for the want of a proper appreciation of the value of time, and judicious economy.

The lower veins of coal underlie nearly the entire coal formation of this Basin, containing not less than ninety thousand acres of five known workable veins, viz: The three feet, four feet, and six feet veins. The Parker vein, (20 inches very pure coal) and the Bluebaugh vein $3\frac{1}{2}$ feet. These five veins will yield not less than fourteen thousand tons of coal per acre, giving for the area of the Basin one billion two hundred and sixty millions tons of coal. These small veins will prove of great commercial value to the State when the fourteen feet vein is exhausted.

The three, four and six feet veins are opened in the George's Creek Valley, along the Potomac and Savage Rivers, and very recently the six feet vein has been opened by the Grant Coal Company on the side of Dans Mountain near Clarysville, and close to the George's Creek Road now building and the old Echart Branch Road. This is a bright, lustrous coal, very similar to the Clearfield coal, yielding four and one-half feet of coal clear of slate partings and bone coal. The Parker and Bluebaugh veins have been opened at the northern end of the Basin near Barrellville.

In addition to these known valuable veins of coal in the Cumberland Basin, is the meadow mountain coal field, crossing the Baltimore & Ohio Rail Road near Oakland ; it is evidently an extension of the Saulsbury Coal Basin, at least it contains the lower coal veins of that Basin; it is very important that a careful survey and examination of this Basin should be made. The Youghiogheny coal field beyond this, is also worthy of a careful survey and examination ; while very many reports have been made of the Cumberland Coal Basin by scientific men standing deservedly high in their profession, they have been simply reconnoissance ; they have all felt and expressed the want and need of a careful and accurate instrumental survey of the Basin; Dr. P. T. Tyson in his report to the Legislature in 1860, suggested the absolute necessity of a full and complete instrumental survey of the State not already covered by the Coast Surveys. He considered it absolutely essential to aid in forming a correct idea of the agricultural and other capabilities of this State. In attempting to make a Geological map of the State in the absence of any instrumental survey, he had simply to apply Geological illustration, being only approximately correct. Thousands of dollars have been lost to the State and wasted in the coal region for the want of a correct Topographical and Geological map. Pennsylvania is engaged in completing a second Geological survey including economical Geology, discovering new sources of wealth and inviting the profitable investment of capital within her borders. New Jersey is engaged in a survey which is very successfully collecting valuable information, adding millions to the wealth of the State, *she has no coal fields*, but is expending large sums in economic Geology. Capital cannot be attracted to the State, nor can business be conducted to the best advantage without the detailed information supplied by a correct survey, money that now goes to incite speculation in the Financial centres, would find more healthful employment in developing the natural wealth and resources of the State.

The survey should be very accurately made, so as to give full information of the natural wealth to be developed and to protect every one from costly mistakes and the State from losses thereby.

The Western States are using such surveys as an advertisement to attract an industrial population, finding it to pay. With our coal, iron-ore and fire clay, furnishing loadstones to attract capital within our borders, the State would soon find it to pay in the increase of a large, active and industrial population and the trade that always follows it. The basis of taxation would be very greatly increased, and the burdens lightened to the whole people of the State.

In all appropriations by the State for the examination of its resources, the amount has been too small to accomplish any permanent good; not less than thirty thousand (30,000) dollars should be appropriated for the purpose of a correct instrumental and topographical survey of the State to be applied as needed under the contract of the Board of Public Works.

The outlets to the Cumberland Coal Basin, are:—

The B. & O. Rail Road passing through Cumberland, up the Potomac River, through the south end of the coal field at Piedmont and Bloomington.

2. The Chesapeake and Ohio Canal from Georgetown, terminating at Cumberland ten to thirty miles south of the coal fields.

3. The Bedford and Pennsylvania Rail Road from Cumberland to Philadelphia and South Amboy, foot of Staten Island. These three main outlets are at present supplied with coal by two branch roads from Cumberland to the mines, viz:

1. The Cumberland and Pennsylvania Road passing up Will's Creek and Jennings' Road by a short tunnel under Frostburg, into the George's Creek valley, and connecting with the B. & O. Road at Piedmont, thirty-four miles.

2. The Echart branch road from the canal Basin, up Will's Creek on the West side, then to and up Braddock's

run to the coal fields at Echart village, 10 miles. These two Branch roads charge the arbitrary price of 2 cents per ton per mile freight on all coal passing over them, this charge virtually excludes all shipments of coal to the canal from the Cumberland and Pennsylvania Road from any company between Lonaconing and Piedmont. The Maryland and American Coal Companies are constructing the George's Creek Branch coal road from the canal at Cumberland to their mines at Lonaconing, especially as a feeder to the canal. This road passes up Will's Creek and Braddock's run, crossing over the transverse ridge to George's Creek valley, thence by two parallel branches to the entrance of their mines a distance of twenty miles, freight one and one-half cents per ton per mile. The construction of this road saves to the shippers of coal over it to the canal, twenty-two cents per ton, and the expense and use of the inclined plane at the mines. In addition to these feeders to the canal, there has been surveyed a line for a Branch Road from Bloomington up the North Branch of the Potomac passing through the lower coal measures and heavy timber lands to the big vein at the Elk Garden Settlement. All the coal veins thicken as they approach the south end of the Basin and lose their State partings; assurances are given from reliable sources, that this branch of eight (8) miles will be constructed during the coming season especially as a feeder to the Canal under special arrangements between the Canal and the B. & O. Rail Road, made at the January Session of 1878.

The distance to market and cost of coal by the various routes now in operation, assuming Lonaconing to be the centre, are as follows :

Via the B. & O. Rail Road.....	214 miles.
Lonaconing to Piedmont, 8 miles; Freight on 2240 lbs.....	16
Piedmont to Locust Point, 206 miles; Freight.....	1.78
Transfer at Locust Point.....	18
Freight to New York, (from an average for 3 years,).....	1.25
Cost of mining 40 cts., expenses at mines 20 cts.....	60
<hr/>	
Cost of coal at New York.....	\$3.97

Via the Chesapeake and Ohio Canal.....211 miles.

Lonaconing to Cumberland, 26 miles, Freight.....	52
Cumberland to Georgetown, 185 miles, toll.....	40
Freight by Steamer.....	75
Transfer at Georgetown.....	18
Freight to New York.....	1.40
Mining 40 cts., Expenses at mines 20 cts,.....	60

Cost at New York by Canal,..... \$3.85

The freight on coal from Baltimore to New York, varies from \$1.25 to \$2.00 per ton; the freight on coal from Baltimore to New York is \$1.60 per ton, at the present time.

Via the Bedford and Pennsylvania Road to South Amboy,...380 miles,

Lonaconing to Junction, 22 miles, Freight.....	44
Junction to South Amboy, 358 miles, $3\frac{1}{4}$ cts. per ton.....	2.66
Transfer at South Amboy.....	20
South Amboy to New York.....	30
Mining 40 cts. Expenses 20 cts.....	60

Total cost at New York by this route,.....\$4.10

The Freight charges on coal over the Bedford and Pennsylvania road had to be assumed at $3\frac{1}{4}$ of a cent per mile per ton, as the officials of that road declined to give the tariff rates. It is very evident that abatements are allowed on coal shipments over those roads in addition to the low assumed charges, in as much as they succeeded in drawing from our transportation companies during the past year not less than 170,000 tons of coal at a loss to the State of not less than 200,000 dollars in toll and freights.

This diversion of the coal trade is becoming a serious question, and unless some steps are taken to recover and retain it, the loss in the future will be severely felt by the State. The solution of the problem is one that vitally affects the whole State, including the agricultural, manufacturing, mining and commercial interests. The solution lies in cheapening the cost of coal both at Georgetown and at Baltimore, and it can be accomplished by first lengthening the locks of the canal so as to admit and pass two boats through at the same time, carrying 230 tons, (instead of as now carrying only 110 tons,) requiring for the locomotion of these

enlarged boats only one-fifth more motive power than is now required to move the boats in use (viz. of 110 tons,) as has been demonstrated; the increase of tonnage diminishes the cost of movement by Steamer 40. to 45 per cent. to Georgetown.

2d. The extension of the canal to Herring Bay, on the Chesapeake. This can be done by leaving the Eastern Branch at Beaver Dam's Creek, following that stream and crossing by a short summit over to the Western Branch of the Patuxent, down it to and with the main Patuxent to Lyons Creek and with it and across a short summit to the Creek making into Herring Bay, the distance of this extension would not exceed twenty-six (26) miles, and could be made a tide water canal, the cost depending upon the depth of water and width of the canal prism.

The cost of towing coal from Georgetown through this Canal up the Bay to Baltimore would not exceed two mills per ton per mile, including the carriers profit.

If the locks of the Canal are lengthened so as to increase the tonnage of each Steamer from 110 to 230 tons per trip and the extension of the Canal to Herring Bay as a tide water canal, coal can be delivered in Baltimore at not exceeding \$2 per ton as is shown by the following :

Cost of Mining 40 cts., Expenses 20 cts.....	.60
Freight on George's Creek Road to Canal.....	.30
Toll on Canal 185 miles.....	.37
Freight by Steamer.....	.40
Toll on Tide water.....	.05
Freight to Baltimore.....	.18
Transfer Charges at Baltimore.....	.10
<hr/>	
Total Cost at Baltimore.....	\$2.00
<hr/>	
Freight to New York.....	1.25
<hr/>	
Total Cost at New York.....	\$3.25

The cost on the Canal at present by Steamer to Georgetown is (2 8-10) two and eight-tenths mills per ton per mile, with the improved locks for boats of 230 tons, (requiring as above stated an additional expense of only one-fifth more motive

power,) the cost per ton per mile would be reduced to (1.38) one and thirty-eight hundredths mills. That the above assertion is founded on actual fact and has been proven by experience, will be seen from the following :

The cost, as given by the State Engineer of New York, on the Erie Canal, in 1872, to a select Committee of the U. S. Senate on transportation to the seaboard, on the old Erie Canal with boats of 76 tons, with four feet of water is (4.14) four and fourteen hundredths mills per ton per mile; with the present improved Canal, seven feet of water and boats of 210 and 230 tons, the cost is (2.16) two and sixteen hundredths mills per ton per mile, with the re-enlarged Canal with eight feet of water and boats of 690 tons the cost is still further reduced to the low figure of (1.04) one and four hundredths mills per ton per mile—these rates included towing by horse-power; since then steam has been introduced by the Belgian or Cable system, greatly reducing the cost of moving coal. (This Canal has paid the original cost of its construction, the cost of its improvement and the cost of its branches, besides returning a large revenue to the State, as reported by the State auditor of New York.) The same authority gives the cost on the Hudson River, with barges of 500 to 690 tons, drawing seven and one-half feet of water, to be from three-fourths to one mill per ton per mile. The eminent Civil Engineer, W. J. McAlpine, reports to the Committee the cost of movement of freight from Chicago, via. Oswego, to New York, to be one and sixteen hundredths mills per ton per mile; this includes interest on the capital invested, and pays all repairs on the boats. The cost of towing coal on the Ohio River, from Pittsburg to New Orleans is two-thirds of a mill per ton per mile; the cost of towing coal to the operators at Pittsburg and Kanawha to Cincinnati and St. Louis, is two mills per ton per mile, including (the carriers profit and) the return of the barges to the mines against the current of the Ohio River.

The practical effects of Canals is to reduce railway charges, and to confer on the public the benefit of cheap transporta-

tion on heavy goods that require the lowest freight charges.

The Pennsylvania Rail Road owns over 400 miles of Canal along side of its great road, finding it cheaper to carry heavy freight, such as coal, iron, lumber, &c., by Canal than by Rail Road. The superior advantages of artificial water communication for cheap transportation of heavy commodities is very clearly shown by the large amount of freight (80 per cent.) carried from New York and Philadelphia to Baltimore through the Delaware and Raritan and Chesapeake and Delaware Canals, although these cities are connected by first class roads under very able management.

The time is very rapidly approaching when the West will demand additional water communication for the cheap transportation of her products to the seaboard; the shortest and cheapest route lies in the extension of the Chesapeake and Ohio Canal from Cumberland through the coal fields of Maryland and Pennsylvania to Pittsburg and Lake Erie. The construction and completion of this great work as originally designed would confer equal benefits to the country and to the commerce of Baltimore, similar to that which followed the building and completion of the Erie Canal, to which the City of New York owes its commercial and financial greatness. With the improvement and extension of the Chesapeake and Ohio Canal and the construction of the Ship Canal across the Peninsula of Maryland and Delaware, Baltimore, with the advantages of her geographical position would make New York tremble and fear for the supremacy. These questions are national in their scope and bearing, and should be treated by the Legislature of our State in a manly and Statesman-like manner. The cost and charges by water communication on heavy goods are sustained and endorsed by the celebrated Civil Engineer, W. J. McAlpine, in his estimates on water transportation, as will be seen from Senator Windom's report to the U. S. Senate, on "water transportation."

The Commission examined the Sau'sbury bituminous coal

basin near Myersdale, on the Pittsburg branch of the B. and O. R. R. It lies in a beautiful and fertile country, on Castleman River, between the Alleghany and Negro Mountains. The principal vein of coal in this basin is the ten feet vein of Pittsburg coal, vertical section showing six feet of clean coal, clear of slate partings and bone coal, with good undermining and hard roof, and ought to produce 8,000 tons per acre; the area of this vein, as given by the second Geological survey of Pennsylvania, is 2,788 acres, including crop coal. It is principally owned by the Cumberland and Ellick and Keystone Mining Companies; the coal is very much like the three and four feet veins of the George's Creek Valley--dark, hard and lustrous, and will bear shipment well. The five lower veins of this basin cover an area of 35,000 acres, according to the same report of the State Geologist of Pennsylvania.

The present routes of shipment of this coal to market are the Saulsbury Branch Road, 6 miles, and the Pittsburg Branch Road, 37 miles to the Canal (total) 43 miles. To Baltimore, 223; To Philadelphia 306; to Pittsburg, 116.

None of this coal can be shipped by Canal on account of a discrimination by the B. and O. R. R. against the Canal.

The Commission closed its final field work by an examination of the Clearfield bituminous region, which lies in Clearfield County, Pennsylvania, beyond the Alleghany Mountains, in a long range of Pine Hills along the Moshannon Creek; this coal field is divided into a number of very narrow sub-basins, Osceola and Phillippsburg being the centre of the first and second sub-basin; all the coal shipped from this basin coming from ten or twelve mines near Houtsdale, or the Beaver branch of the Moshannon, five miles above Osceola—the mines around Osceola having been worked out and abandoned, the lower veins are too full of sulphur and iron pyrites for market, The Morrisdale mine north-west of Phillippsburg, is being worked to a limited extent; the character of the coal not being equal to that of the mines near Houtsdale. The main veins of coal show a vertical section

of six feet, giving, when not disturbed, four and one-half feet of good, bright, lustrous coal, resembling strikingly in structure and analysis, the six feet vein of the George's Creek Valley. This coal has a high standard for steam purposes with the Pennsylvania Rail Road.

The entire coal field is very irregular and full of faults, clay-veins, trouble, uneasy and rolling floor and roof, thinning out the coal in many places to only a few inches; in many places rotten roof and swamps with water, which has to be drawn off by the miner with a small hydraulic pump, making it both unpleasant and expensive to the mines.

The region presents a very uninviting appearance for any comforts of life to the miners, who are living in shanties stuck here and there among the pine stumps along the side of the hills.

The extent of these several sub-basins of coal does not exceed eight or ten thousand acres, from information obtained from a reliable and well-informed Mining Engineer, a resident of the region. The outlet for the shipment of this coal is by the Pennsylvania and Tyron Branch passing through the coal field. The grade on this branch in climbing the Alleghany Mountains is 140 feet per mile, for six miles against the trade; requiring three Locomotives to take a train to the summit.

The distance from the Clearfield coal region to Baltimore is two hundred and thirty miles, and to South Amboy, three hundred and twenty-two miles. This coal field is sixteen (16) miles farther from Baltimore than the Cumberland coal field, and its coal is inferior to the Cumberland coal, yet in face of these disadvantages, and owing to the fostering care and protection of the Pennsylvania Rail Road, it has secured a large trade, and is brought very seriously into competition with the fourteen feet vein of the Cumberland coal. The freight charges on the Pennsylvania Road are uniform per ton per mile, with the exception of a charge of five cents per ton on the mine branches to the Tyron Branch. *As the proper location and construction of the*

proposed Ship Canal across the Peninsula, formed by the States of Maryland and Delaware, has a very important bearing on the future of the coal and iron trade of Maryland, West Virginia, and Pennsylvania, the route selected should be *open to navigation* at all seasons of the year to aid ocean commerce, this can only be accomplished by the selection of the *Choptank route*, the advantages and description of which, will be seen from the following pages :

The Maryland and Delaware Ship Canal. Showing the character and cost of the three great competitive routes across the Peninsula, and the advantages of the great Choptank Route.

The surveys of the Ferry Creek and Owenstown routes were made under the direction of Col. W. P. Craighill, that of the Sassafra route by William Cullen Brown, civil engineer, for Horace B. Tebbitts of New York, under charters from the States of Maryland and Delaware. The late eminent Engineer, B. H. Latrobe, as consulting engineer in 1874, made an estimate of the cost of a ship canal on this route of 25 feet deep, 100 feet wide at the bottom, with beam $14\frac{1}{2}$ feet wide and 29 feet above the bottom of the Canal, with incidental work (not including tide locks) \$12,473,643, Col. Craighill's estimate on this same route in 1879, is \$8,085,643.

This route leaves the old Brewerton Ship Channel below Balt.	15 miles.
Thence up Chesapeake Bay.....	24 "
" " Sassafra River.....	17 $\frac{1}{4}$ "
" " Across Black Bird Creek and down said Creek to the Delaware River, <i>above salt water</i> ,.....	15 "
Thence down the Delaware to the Capes.....	58 "
<hr/>	
Total distance.....	129 $\frac{1}{4}$

The great objection to this route is, that the line of the Canal will be directly in the current of the Susquehanna River for a distance of thirty miles, filling the bottom of the Canal with debris in every flood from that river, and also, during the ice embargo through the Winter and late in the

Spring, floating ice would prove dangerous to navigation ; in addition to these very strong objections is the difficult navigation of the Delaware River and Bay.

The time consumed in reaching the Capes from Baltimore by this route, when clear of ice, estimating the speed at 5 miles per hour through the Canal, and at 10 miles per hour in the Bay and River would be 15 hours.

The Queenstown route covers the same ground as the Sassafras route for.....	15 miles.
Thence into and up the Chester River to Queenstown.....	21½ "
Thence across the <i>high country</i> to the Broad Kill Creek.....	54 "
Thence down said Creek to the Delaware Bay.....	4 "
Thence to the Capes.....	13 "
<hr/>	
Total distance by this route.....	107½ "

Col. Craighill's estimate of the cost of this route is \$37,000,000.

The time consumed in reaching the Capes by this route, estimating the rate of speed per hour to be the same as on the Sassafras route would be 16 hours.

The principal objections to this route are as follows: 1. The crossing of the current of the Susquehanna River. 2. The ice in the Queenstown Creek and Harbor during the Winter. 3. The blocking of the mouth of the Chester River from Swan Point to Love Point by ice, from floods in the Susquehanna River during North and North West Gales, prevailing during the Winter (carrying away last year the Light House on Love Point.) 4. The extreme length of the Canal, viz. 54 miles. 5. The very deep cutting of the entire length from Queenstown to the Broad Kill from 75 to 100 feet. 6. The constant danger of land slides during the progress of the work, and for years after its completion. 7. The necessity and expense of maintaining two ship Canals, if either this or the Sassafras route is adopted.

The Ferry Creek route also embraces the same ground as the other two, until it reaches the Craighill Channel a distance of..... 12 miles.

Thence by said Channel down the Chesapeake Bay to the Great Choptank River and up said River to Ferry Creek..... 68 “

Thence through a low, flat and swampy country to Walnut Landing on the Nanticoke River..... 14½ “

Thence up that broad and navigable river to the junction of the gravelly and Deep Creeks..... 15 “

Thence up the broad valley of Deep Creek..... 4½ “

Thence across the short summit to the head of Broad Kill..... 12 “

Thence down the very wide and deep valley of said Creek..... to near Lewes on the Break Water on the Delaware..... 10 “

Thence to the Capes..... 13 “

Total distance by this route..... 149

Col. Craighill's estimate of the cost of this route is \$16,500,000

The time consumed in reaching the Capes by this route, estimating the rate of speed per hour to be the same as on the other two routes would be 16 hours. This time can be reduced to 14 hours by making open cuts, between the Choptank and Nanticoke River and Broad Kill Creek, converting the short Canal into an open Ship Channel, making this route the shortest one to the Capes.

The advantages of this route are the following :

1. It entirely avoids the currents of the Susquehanna River, by passing down the Craighill Ship-Channel, opened and established by the present able U. S. Engineer, now in charge of the Harbor defences of Baltimore, in order to avoid the danger of floating ice, and the annual heavy expense of keeping open the Brewerton Ship-Channel from the debris brought down by the floods of the Susquehanna.

2. The money expended in opening and improving this Ship Channel is so much toward lessening the cost of the Ferry Creek route.

3. The open River Navigation, nature's highway, and the mild climate as compared with the other routes, for daily records kept for 30 years show that the Choptank River is obstructed by ice for a period of from 20 to 30 days less than the Queenstown route, and from 30 to 40 days less than

the Sassafras route; all danger of obstruction by ice on the Ferry Creek route, could very easily be removed by opening the tide gates at the Break Water on high tides and letting in the salt water, making its influence felt very perceptibly through the Canal to the Choptank River.

4. It is more national in all its features and bearings, affording a more rapid communication with the National Capital by rail from Annapolis Harbor and Naval Academy, extending its benefits to the coasting trade of the Nanticoke, Potomac, Rappahannock and James Rivers, and through Norfolk to the Chesapeake and Albemarle Canal, also to the Chesapeake and Ohio Rail Road by a short branch road to the Rappahannock and via it to the Nanticoke to the Ship Canal.

5. By the construction of a short tide-water Canal from Herring Bay on the Chesapeake, opposite the mouth of the Choptank, to the Eastern Branch of the Potomac, not exceeding 26 miles in length, and only two short summits to cross via Lyons Creek, Patuxent River, the Western Branch and Beaver Dam's Creek, direct communication can be had with Washington Navy Yard and the Chesapeake and Ohio Canal at Georgetown. This would not only be an eminent benefit to the commercial prosperity of the District, *but would open a future to the coal and mineral lands of Maryland, West Virginia and Pennsylvania.* Then, by extending the locks on the Chesapeake and Ohio Canal to twice their present length, so as to double the carrying capacity of the boats. (requiring for their movement only one-fifth more power than is now required,) Cumberland, Pennsylvania and Virginia coal could be placed at Herring Bay, and at Lewes at the Break Water, at such prices as to defy competition from any other coal field. Coal depots at these last named points would command the entire coasting trade. The effect would be the employment of an immense capital in the active development of the coal and mineral lands of Maryland, West Virginia and Pennsylvania, requiring additional Branch Roads to the B. & O. R. R., and Canal for transportation; a very large

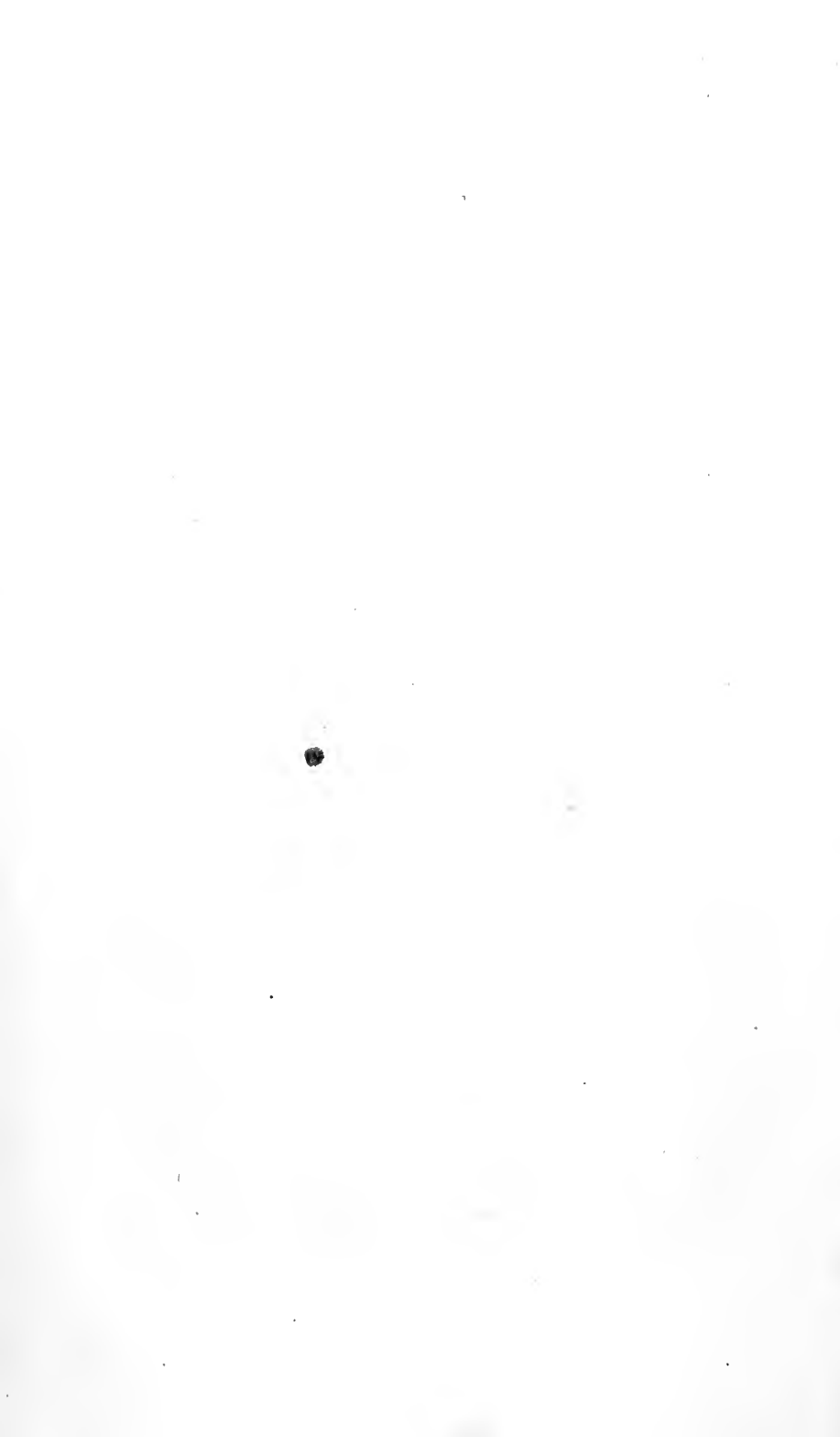
increase of mining population, rendered necessary to bring into active commerce several millions of dollars now lying idle under the surface of the mountains, thereby very largely increasing the basis of taxation in the above States, and extending its influence to the National Government. The commercial advantages to the Cities of Baltimore, New York, Philadelphia, Boston and Richmond, would be immense, and apparent to the most casual observer; besides the vast advantage to the entire country in a commercial point of view, the great saving of life and property from wrecks along the coast from the Capes of the Delaware to those of the Chesapeake which would be thus attained ought to command the close attention of Congress.

The above views as to the importance of maintaining the present Ship Channel to Baltimore, are fully endorsed by the U. S. Engineers in charge of the Harbor defences after a careful study of 27 years, as is very clearly stated by Col. Craighill in his report of 1867, and endorsed again in his final report on the Ship Canal surveys to the Chief of Engineers.

The Commission beg leave respectfully to submit the above report.

W. H. SMITH,
C. H. HAMILL,
JOHN RYAN.

Frostburg, Md., Jan. 9, 1880.



MINES COMMISSION

REPORT.

1880.

APPENDIX.

Tuesday, July 22d, 1879.

The Commission, consisting of William H. Smith, C. H. Hamill, and John Ryan, appointed by the Governor of Maryland, on the 22d day of May last, as per Act of the General Assembly, passed at the January Session of 1878, Chapter 157, Section 15, to examine the mines in Alleghany and Garrett Counties, in this State, met this day at Lonaconing and organized.

After a general discussion and free exchange of opinions as to their duties, the Commission adjourned to meet to-morrow morning at ten o'clock.

Wednesday, July 23d, 1879.

Pursuant to adjournment, the commission met this A. M., at Lonaconing. After the transaction of such business that presented itself, the commission adjourned to meet to-morrow, at nine o'clock.

Thursday, July 24th, 1879.

As per adjournment, the commission met this A. M. at Lonaconing. It was decided at this meeting to commence the tour of examinations at the Borden mine, to-morrow morning. The commission then adjourned to meet at Frostburg to-morrow morning at seven o'clock.

Friday, July 25th, 1879.

Pursuant to adjournment, the commission met this A. M. at Frostburg. They then proceeded to the mine of the Borden Mining Company, situated about one mile north of Frostburg. Called on A. C. Greene, Superintendent of the Company, who received the commission courteously and kindly, and gave every facility for examining the mine by placing the commission in charge of John Davis, the master miner, who accompanied the commission

through the various workings of the mine. This mine is connected with the C. and P. R. R. by two incline planes, one of 600 feet long, and the other 1,400 feet long. Notwithstanding this mine is nearly worked out, nothing being left but the pillars, which are now being drawn out, yet the mine is well ventilated and well timbered. The men, without exception, expressed themselves as being perfectly satisfied with treatment in every respect. In conferring with the miners, there was one named William Donoho, who deserves special mention ; he is seventy-six years of age, has been working in this mine for the last twenty-six years, he enjoys good health, and says that he could sleep in this mine from one week's end to the other in perfect safety, so far as health is concerned.

NEW HOPE MINE.

Leaving the Borden mine, the commission visited what is known as the "New Hope Mine" of the Consolidation Coal Company. This mine is situated about one-half mile north-east of Frostburg, the workings of the mine running directly under the Town. James B. Thomas, the mine Superintendent of all the Consolidation Coal Company's mines, had previously given instructions to his master miners at the various mines, to give every facility to the commission for making an examination that would be satisfactory to them. Benjamin Thomas is the master miner at the above mine. He met the commission very courteously and accompanied them through a number of the workings.

This mine is well ventilated by a good furnace, and is supplied with an abundance of timber for the protection of the property as well as the safety of the miners. The commission conferred with several of the miners, among whom was one named George Jeffries, who said he was seventy-four years of age, and has been working in this coal field for the last twenty-six years ; he is robust, and enjoys good health. He requested the commission to say to the

Governor that there is no truth in the reports about obnoxious gases in these mines—that such a thing does not exist.

The commission conferred specially with a miner in this mine named John O. Price, who is a member of the Town Council of Frostburg, and a miner of long experience. He was engaged in driving a heading. He expressed himself as being perfectly satisfied with the ventilation of the mine, as well as the general treatment received at the hands of his superiors.

This mine connects with the C. & P. Rail Road by a short tramroad.

THE FROSTBURG MINE

which adjoins the New Hope Mine, and owned by the Consolidation Coal Company, being abandoned, the commission did not deem it necessary to visit it. The commission adjourned to meet at the Midlothian mine to-morrow morning at seven o'clock.

Saturday, July 26th, 1879.

Pursuant to adjournment, the commission met this morning at the Midlothian mine of the New Central Coal Company. Malcom Sinclair is the general Superintendent of the New Central Coal Company. James Thompson is the Superintendent at the above mine; he received the commission very kindly and afforded every accommodation for a fair and impartial examination of the mine. This mine is nearly worked out, the commission visited every working in it, and held conferences with all the men in it. The mine is well ventilated; with plenty of timber on hand. No complaints whatever on the part of the workmen. This mine is connected with a branch of the C. and P. Rail Road by a tramroad about one mile in length, worked by horse power.

BLANE AVON MINE.

Leaving Midlothian, the commission visited the mine of the "Blane Avon" Coal Company; Archibald Stewart,

Superintendent. He accompanied the commission through all the workings. This mine, like the Midlothian, is a small mine and nearly worked out, there being nothing left but some pillars which are now being drawn out. The mine is well ventilated ; plenty of timber on hand for all practical purposes, and no complaints on the part of the miners. This mine is connected with a branch of the C. and P. Rail Road by a short incline plane, about one and a half miles S. W. of Frostburg. The commission adjourned to meet at the Hoffman mine of the Consolidation Coal Company, on Monday morning, at seven o'clock.

Monday, July 28th, 1879.

The commission met this morning at the Hoffman mine of the Consolidation Coal Company. Joseph B. Thomas, who has charge of this mine, met the commission and made the necessary arrangements for an examination of the mine.

Thomas Brown, who has the active and immediate charge of the ventilation of this and the adjoining mine, known as the Pompey mine, accompanied the commission through a number of the workings. The system of ventilation in this mine is very thorough, fresh and pure air in every part of the workings.

The commission conferred with a number of the workmen in this mine, all of whom expressed themselves kindly, and as satisfied with their treatment. No complaints made. The coal is hauled out of this mine by a small locomotive engine. The ventilation is so arranged as to prevent any of the smoke from entering the general workings of the mine.

POMPEY MINE.

Leaving the Hoffman mine, the commission visited the Pompey mine above referred to. Philip McMahon, one of the master miners, accompanied the commission through a number of the workings of this mine. The ventilation and general management are all that could be desired.

The coal is hauled to a siding near the bottom of a slope by a small locomotive engine. The smoke, however, is forced back and not permitted to circulate through the workings.

This mine, as well as the Hoffman mine, is worked on the pillar and room system of mining. Both are connected with Eckhart branch of the C. & P. Rail Road, about two and a half miles south-east of Frostburg. These mines are well supplied with timber for all practical purposes, and ventilated by good furnaces.

The miners, interviewed by the commission, expressed themselves in a very satisfactory manner, among them was one who has been working in this mine during the past twenty-seven years, and who now enjoys good health.

Adjourned to meet to-morrow morning at seven o'clock.

Tuesday, July 29th, 1879.

Pursuant to adjournment, the commission met this morning at Frostburg. After the transaction of such business as came before them, they adjourned to meet at the Borden Shaft to-morrow morning at seven o'clock.

Wednesday, July 30th, 1879.

As per adjournment, the commission met this morning at the Borden Company's Shaft, where they were met by William McMillin, the master miner, who accompanied them down the shaft and through the various workings of the mine, giving every opportunity for making a full examination. The commission found the ventilation good. No complaints whatever on the part of the workmen of whom we made inquiry. Plenty of timber on hand for the protection of the property, as well as the lives and general safety of the miners. The mine is worked on what is known as the stall and pillar system of mining; the roof being very hard, very little timber is required for its support. The ventilation is accomplished by a good and sufficient furnace.

The coal at this mine is mined by measurement instead

of weight. The mine cars contain, each, eighty cubic feet, for which the miner is allowed and paid for two tons. This coal being under water level is regarded as somewhat heavier than the coal above water level. The hoisting shaft is one hundred and sixty feet deep; the water shaft is one hundred and eighty-four feet deep.

This mine is situated about two and a half miles south of Frostburg, immediately on the line of the C. & P. Rail Road.

OCEAN MINE.

July 30th, 1879.

Leaving the Border Company's Shaft mine, the commission visited the Ocean Mine of the Consolidation Coal Company. James B. Thomas, Superintendent of the Company met and accompanied the commission through this mine, affording every facility for making a satisfactory examination. This mine is well ventilated by a good and sufficient furnace, and is worked on the panel system, with one hundred foot pillars and fifteen foot rooms. The top coal is worked in this mine; the bottom is not worked. No complaints on the part of the workmen. An abundance of timber on hand for all practical purposes. This mine is situated directly on the line of the C. & P. rail road, about four and a half miles south of Frostburg.

MILLER MINE.

Leaving the Ocean mine, the commission visited the Miller or National mine of the Hampshire and Baltimore Coal Company. This mine is nearly worked out, nothing remaining but a portion of the pillars which are being drawn back as fast as circumstances will allow. The mine is well ventilated and in excellent condition, with plenty of timber on hand for all practical purposes. Robert Anderson is the master miner and understands his business well. He was obliging in rendering all necessary aid in the explanation. No complaints from the workmen

at this mine. The Miller, or National mine is connected with the C. & P. rail road, by a branch road some two miles in length, about five miles south of Frostburg.

Thursday, July 31st, 1879.

The commission met this morning at the "Buck Hill" mine of the George's Creek Coal Company, where they were met by John Douglas, Superintendent, who placed them in charge of Capt. John Douglas, Assistant Superintendent, with instructions to give the commission every necessary facility to enable them to make a satisfactory examination of the mine. This mine is worked on the square system. It is thoroughly ventilated, possessing very great natural advantages, of which Capt. Douglas availed himself, and succeeded in making this a model mine in every particular. All the appliances at this mine, both for the successful management of the business and the comfort and convenience of the miners, are complete. The mine has a capacity sufficient for placing four hundred miners at work. This mine is situated at Lonaconing, and is connected with the C. & P. rail road by an incline plane, six hundred feet long.

Adjourned to meet to-morrow morning at the American Company's mine.

Friday, August 1st, 1879.

Pursuant to adjournment, the commission met this morning at the "Jackson" mine of the American Coal Company. A. J. Clark, Superintendent, received the commission very courteously, and after making necessary arrangements to enable the commission to prosecute the examination successfully, the commission was placed in charge of John Bradborn, master miner, who accompanied them through a number of the workings. The commission found this mine in complete order. All the appointments in full harmony for a proper and economical management of the Company's business, as well as the comfort and convenience of the miners. The headings of this mine

were supplied with an abundance of pure air, but in the opinion of the commission, this air was not properly distributed throughout the workings of the mine. The commission, therefore, felt it to be their duty to make such suggestions, that would, if adopted, give a full and free circulation throughout the mine. The suggestions were received kindly and promptly adopted. The mine is worked on the square system, and is well supplied with timber. This mine is situated at Lonaconing, and is connected with the C. & P. rail road, by a narrow gauge road $1\frac{1}{4}$ miles long worked by an engine and a plane 900 feet long.

Saturday, August 2d, 1879.

As per adjournment, the commission met at the Koontz mine of the New Central Coal Company this morning. Robert Boyd is Superintendent, at this mine. He met the commission courteously, and accompanied them through the mine, and rendered all necessary aid in making a proper examination. The commission found this the most difficult mine in the region to work, and ventilate, yet the ventilation is perfect, pure and fresh air being distributed throughout every working in the mine. The drainage of this mine is very complete. Everything, indeed, looking to the comfort and health of the miners, as well as an economical management of the Company's business, has received proper attention. The mine is ventilated by a very superior furnace. The mine is worked on the pillar and room system, with rooms sixteen feet wide, and pillars twenty-four feet thick. This mine is connected with the C. & P. rail road, at Lonaconing, by an incline plane seven hundred feet long, and a narrow gauge road about $1\frac{3}{4}$ miles in length, worked by a small locomotive engine.

Adjourned to meet on Monday morning at 7 o'clock.

Monday, August 4th, 1879.

Pursuant to adjournment the commission met this morning at Lonaconing. After the consideration of previous

business, the commission adjourned to meet to-morrow morning at 7 o'clock.

Tuesday, August 5th, 1879.

As per adjournment, the commission met this morning at the Big Vein mine of the New Central Coal Company. Robert Boyd who is the Superintendent of this mine, as well as the Koontz mine just referred to, met and accompanied the commission through the various workings of this mine, affording every opportunity for making a thorough examination. The mine is well ventilated and well worked. The miners conferred with, expressed themselves as being perfectly satisfied, having no complaints whatever, to make. The commission had an interview with the Hon. Patrick Carroll, who works in this mine. He said the ventilation was good. This mine is nearly worked out, the principal work now is drawing back the pillars. This property had originally two hundred acres, over three-fourths of which is now worked out.

Adjourned to meet to-morrow morning at the "Dug Hill" mine of the George's Creek Coal Company.

Wednesday, August 6th, 1879.

Pursuant to adjournment, the commission met this morning at the "Dug Hill" mine of the George's Creek Coal and Iron Company, where they were met by John Douglas, Superintendent, who placed the commission in charge of Capt. John Douglas, assistant Superintendent, and John Boyd, master miner. These gentlemen accompanied the commission through the mine, affording every opportunity for making a full examination. This mine has three main entrances, connected by cross headings; one of these entrances is worked by a small engine for a distance of thirty six hundred feet. This entrance has an independent ventilation, preventing the vitiated air from entering the workings of the mine, having an independent air course aided by a furnace, when necessary. This mine is worked on the pillar and room system, It is thoroughly ventilated throughout the

workings. No complaints on the part of the miners. The mine is well supplied with timber for the protection of the property as well as the safety of the miners. This mine is connected with the Cumberland and Pennsylvania rail road at Lonaconing, by an incline plane four hundred feet long.

Adjourned to meet to-morrow morning at the mines of the Maryland Coal Company.

Thursday, August 7th, 1879.

As per adjournment, the commission met this morning at the mines of the Maryland Coal Company, where they were joined by F. E. Bracket, Superintendent, who placed the commission in charge of James Little, master miner, and who accompanied the commission through the mine, affording every facility for making a full examination. This property has four mine openings, namely, the "Old Detmold," the "Savage," the "Kingsland," and the "New Detmold;" the old Detmold mine is the original opening. It is connected with the C. & P. rail road at Lonaconing by an incline plane twelve hundred feet long. This mine is nearly worked out, there being nothing left but a portion of the pillars which are now being drawn out. In consequence the mine is very imperfectly ventilated. The Kingsland mine is connected with the above incline plane by a narrow gauge road about one mile in length and worked by a small engine. This is comparatively a new mine. The commission explored this mine a distance of four thousand feet, visiting several of the headings and quite a number of the rooms, including rooms where the miners were engaged in drawing pillars. The ventilation is good throughout. The mine is in fine condition and bears evidence of marked skill and care in its management. It has an abundant supply of timber for all practical purposes.

Leaving the Kingsland mine, the commission visited the Savage mine. This mine is midway between the Kingsland mine and the old Detmold mine, and is connected with the incline plane at the latter mine by the narrow gauge road

connecting the Kingsland mine with the incline plane above referred to. The commission explored this mine a distance of twelve hundred feet, when their further progress was arrested by bad air commonly called "black damp." Mr Little informed the commission that the men at this mine could only work at intervals of from one to five hours per day, some days not at all, depending entirely on the condition of the atmosphere outside of the mine; that the amount of workable coal remaining was so small that it would not justify the outlay necessary to secure proper ventilation. In consequence of the bad air in the Savage mine, and the imperfect ventilation in the old Detmold mine, the commission addressed a note to Mr. F. E. Brackett, Superintendent, suggesting that he draw his miners out of the two mines above referred to, and place them in his Kingsland mine, until cool weather or until it is safe to replace them. The new Detmold mine above referred to, has not been worked during the past three years, in consequence of which the commission did not deem it necessary to visit it.

Adjourned to meet at the "Atlantic and George's Creek Coal Company's" mine, to-morrow morning at 7 o'clock.

Friday, August 8th, 1879.

Pursuant to adjournment, the commission met this morning at the mine of the Atlantic and George's Creek Coal Company, where they were met by John Sheridan, Superintendent, who placed the commission in charge of Andrew Mains, Master Miner, thereby affording every opportunity of making a thorough examination of the mine. This mine is connected with the C. & P. Rail Road at Pekin, one mile south west of Lonaconing, by an incline plane nine hundred feet long, together with a narrow gauge road twenty-two hundred feet long, which is worked by a small engine. This mine is nearly finished, nothing now remaining but a few pillars which are being drawn out. The ventilation is good in every part of the mine that is now being worked. Plenty of timber

on hand for all practical purposes. No complaints on the part of the workmen.

Adjourned to meet at Swanton mine, to-morrow morning at 7 o'clock.

Saturday, August 9th, 1879.

As per adjournment, the commission met this morning at the mine of the Swanton Coal Company. Archibald McDonald, Superintendent, met the commission and courteously afforded every facility necessary for making a thorough examination. This mine is connected with the C. & P. rail road at Barton, by an incline plane twenty-eight hundred feet long and a tram-road five thousand feet long. This mine is nearly all worked out, nothing left but a few pillars that are now being drawn. The mine is well ventilated with an abundance of pure air, throughout the workings.

Adjourned to meet at Barton on Monday next.

Monday, August 11th, 1879.

Pursuant to adjournment, the commission met this morning at the mine of the Barton Coal Company, where they were met by John Lyons, Superintendent. He received the commission very kindly, and made arrangements necessary to enable them to make an examination of his mine. This mine is connected with C. & P. rail road, by a narrow guage road one-and-a-half miles long, worked by a small engine, together with two incline planes of fifteen hundred feet each in length, one inside of the mine, the other outside. The mine is well ventilated with an abundance of pure air circulating throughout the workings. Timber at convenient points sufficient for all practical purposes.

Adjourned to meet to-morrow at the mines of the Piedmont Coal Company.

Tuesday, August 12th, 1879.

As per adjournment, the commission met this morning at the mine of the Piedmont Coal Company. John Summer-ville is the Superintendent. He received the commission very courteously, and took great pleasure in the examination

of his property. The mine is connected with the C. & P. rail road by two incline planes, of twenty-eight hundred feet each in length, situated near Barton, about midway between Lonaconing and Piedmont. The mine is nearly worked out, only a few pillars remaining which are now being drawn. The mine is well ventilated and well supplied with timber.

SMALL VEIN.

The commission examined a three foot vein of coal on the above property, which is now opened and being worked successfully. The Company have already shipped some twelve thousand tons from this mine. The coal is clean and pure, and costs but very little, if any, more to mine than the large vein, the mine being worked on the long wall system; the ventilation is perfect.

Wednesday, August 13th, 1879.

The commission met this morning, at the mines of the Franklin Coal Company. Henry C. Black, Superintendent, received the commission courteously and made the necessary arrangements for an examination of his mine. In company with Patrick Grant, the master miner, the commission visited a number of the headings and workings of the mine. This mine is worked on the double pillar and single room system. It is well ventilated, and has plenty of timber for all practical purposes. This mine is connected with the C. and P. rail road at Franklin, about one mile north west of Piedmont, by three incline Planes, two of which are 3-8 of a mile each in length, while the third is but two hundred feet long. This property is much reduced, there are not over seventy-five acres of workable coal left in it.

Thursday, August 14th, 1879.

The commission met this morning at the mine of the Hampshire and Baltimore Coal Company. Charles Shaw, who is the Superintendent, met the commission very courteously, and he, together with John Fahey, the master miner, accompanied the commission through the various workings of

the mine, affording every facility for making a thorough examination. This mine is worked on the pillar and room system—rooms sixteen feet wide with pillars of twenty feet thick. The commission found this mine well ventilated and well managed in every particular—well supplied with timber for all mining purposes. This mine is connected with the C. & P. Rail Road about three-fourths of a mile north-west of Piedmont by an incline plane two thousand feet long, together with a narrow gauge road one mile and a quarter long, worked by a small engine.

Adjourned to meet to-morrow morning at the mine of the Laugolan Coal Company, in Garrett County.

Friday, August 15th, 1879.

Pursuant to adjournment, the commission met this morning at the mines of the Laugolan Coal Company, situated about one half mile west of Bloomington, on the line of the B. & O. Rail Road in Garrett County, facing the Savage River. John Summerville, the Superintendent of the mine, rendered valuable assistance to the commission in the examination.

This mine is opened on the four foot vein of coal, which has three and a half feet of clean coal. There have been some four thousand tons shipped from this mine; the coal giving general satisfaction.

This property has a six foot vein of coal opened and ready for work. The property is connected with the B. & O. rail road by a short incline plane.

Adjourned to meet on Monday morning next, to take into consideration the question of weights.

Monday, August 18th, 1879.

Pursuant to adjournment, the commission met this morning at the Franklin mine, for the purpose of examining their weights. The examination here, as well as elsewhere, proved to be very unsatisfactory. The commission spent this entire week between the various mines and the office of the C. & P. Rail Road Company, at Cumberland, endeavoring to get such information that would enable them to make up a correct

statement of the weights for 1878, and the first six months of 1879.

On the refusal of the C. & P. Rail Road Company to give the commission access to their transaction accounts, the commission postponed the further consideration of the matter with the view of having a conference with the Presidents of the various Coal Companies and the President of the C. & P. rail road Company.

Adjourned to meet in Cumberland Monday morning next, to visit the Salisbury coal field.

Monday, August 25th, 1879.

As per adjournment, the commission met in Cumberland this morning, to take the train for the Salisbury region, where they arrived at four o'clock this afternoon.

Adjourned to meet at the mine of the Cumberland and Elklick Coal Company to-morrow morning at seven o'clock.

Tuesday, August 26th, 1879.

Pursuant to adjournment, the commission met this morning at the mine of the Cumberland and Elklick Coal Company. A. Chamberlin, the general Superintendent of the Company, met and received the commission very courteously, and placed them in charge of Benjamin Thomas, the master miner, who gave every facility to make a very thorough examination of the mine. The commission found the mine in good condition and thoroughly ventilated, with main heading driven about two thousand feet, and with cross headings and rooms equal to a working capacity of two hundred miners. At present they are working one hundred miners on half time.

This mine is situated about three miles south-west of Myersdale, and is connected with the Saulsbury branch of the Pittsburg and Connellsville Rail Road by a branch road one half mile in length, together with an incline plane six hundred feet long. This mine, as well as the other mines of this region, is opened on the ten foot vein of the Pittsburg bitu-

minous coal. The breast, or commercial coal, is five and a half feet thick. The bottom, or bench coal, is three and a half feet thick. The latter has too much sulphur in it for commercial purposes; the top is bone. The floor of the mine is hard, the track being laid in grooves thereby saving the expense of cross-ties. The roof is hard and stands solid.

KEYSTONE MINE.

Leaving the Cumberland and Ellick mine, the commission visited the mine of the Keystone Mining and Manufacturing Company, and made a thorough examination of the drawings and working plans of this Company. The difficulty with these mines is the drainage, being the basin, artificial means have to be employed. This mine is now working about one hundred men on half time. It is connected with the Pittsburg and Connellsville rail road at Keystone Junction by a narrow guage road five and a half miles long, worked by a small locomotive. R. Lee Frantz, the Engineer and Superintendent of this mine, received the commission very kindly and gave them all the information solicited.

FLOG HILL MINE.

Leaving the Keystone mine, the commission visited a new mine now being opened by James J. Hoblitzell, known as the Flog Hill Mine, situated on Grassy run, about one mile-and-a-half north-east of Salisbury. This mine is connected with the Salisbury branch of the Pittsburg and Connellsville rail road, by a branch road about one mile long, together with an incline plane about six hundred feet long. This mine has many natural advantages for mining and the economical handling of coal. The drainage is superior to either of the other mines of this region referred to.

Adjourned to meet in Cumberland, on Wednesday morning, 27th inst, to take the train for the Clearfield region.

Wednesday, August 27th, 1879.

Pursuant to adjournment, the commission met in Cumberland this morning, and left on the half-past six o'clock, A.

M. train for Tyrone, Pennsylvania, arriving at Tyrone at one o'clock, P. M. same day. The commission visited the office of S. P. Blair, Superintendent of the Tyrone division of the Pennsylvania rail road, from whom the commission obtained the following information relative to coal shipped from the Cumberland region over the Pennsylvania rail road to South Amboy.

The distance from Savage Junction in Maryland to Huntingdon, Pennsylvania, is.....	85 miles.
From Huntingdon to Philadelphia, is.....	203 "
From Philadelphia to South Amboy, is.....	72 "

Total.....	360 "
------------	-------

Add to this the average distance from the mines to Savage Junction	20 "
--	------

Total.....	380 "
------------	-------

Or aggregate a distance from mines to South Amboy, by the Pennsylvania route. The cost of transportation by this route is as follows: To the Pennsylvania rail road, for 360 miles, at $\frac{3}{4}$ of one cent per ton per mile.....

\$2.70

To the Cumberland and Pennsylvania rail road, for 20 miles, at 2 cents per ton per mile.....

40

From South Amboy to New York.....

30

\$3.40

The distance from Piedmont to Baltimore, is.....	206 miles.
--	------------

From Lonaconing to Piedmont, is.....	8 "
--------------------------------------	-----

Total.....	214 "
------------	-------

or the total distance from Lonaconing to Baltimore.

The transportation by this route is as follows: From Lonaconing to Piedmont on the gross ton.....

24

From Piedmont to Baltimore.....

1.96

\$2.20

From Baltimore to New York at this date, which is unusually low.....

1.20

\$3.40

No allowance made for handling at Locust Point.

The average haul from the Clearfield region to Tyrone is 28 miles. The charges for transportation by the Pennsylvania rail road is a uniform rate per ton per mile from the mines through

There is, however, an additional charge of five cents per ton on the branch roads connecting the mines with the branch roads of the Pennsylvania rail road which has four branch roads running into the region. The Pennsylvania rail road Company pay sixty cents per short ton at the mines for coal for their own use.

The commission left Tyrone for Phillipsburg on the 7.20 P. M. train, a distance of 24 miles, arriving at Phillipsburg at 8½ P. M., where they remained over night.

Thursday, August 28th, 1879.

The commission left Phillipsburg this morning by the 7½ o'clock train for Houtzdale, via Osceola, a distance of ten miles, arriving at Houtzdale at 8½ o'clock, A. M. The mines of this region are connected with the Tyrone division of the Pennsylvania rail road at Osceola. The Gos Run mines are connected with the Houtzdale road about half-a-mile below Houtzdale.

The Mapleton Branch mines are connected with the main stem between Osceola and Phillipsburg. The Morrisdale mines are connected with the main stem four miles beyond Phillipsburg in the direction of Clearfield. The commission examined three mines in this region in the vicinity of Houtzdale, namely, "Perin," the "Franklin" and the "Ocean" mines. The Perin mine averages about two-and-a-half feet of clean coal, troubled at present with clay veins and rolls. Sometimes the rolls reduces the thickness of the coal in many parts of the mine, to a few inches. The drainage of this mine is bad, having in many instances to resort to artificial means to secure drainage to many of the workings.

The Franklin mine is in good condition, being worked under the direction of James R. Cammeron, Superintendent and mining engineer. This mine is well worked, and as far as the commission examined it, found the coal averaging four feet in thickness. Mr. Cammeron represented to the commission that the examination covered a fair average of working, and that the mine maintained an average of four

feet all through. This coal is soft and partakes very much, from appearance, of the character of the bottom coal of the Cumberland region. This mine does a large business, and makes a quantity of coke. Mr. Blair, Superintendent at Tyrone, says that the coal of this region, has no superior for rail road purposes.

Friday, August 29th, 1879.

The commission met this morning at the Ocean mine, which is perhaps the best mine in this region, the coal averaging about five feet in thickness. That part of the mine the commission examined was fully five feet thick. Mr. Whitehead, who has the management of this mine, as well as being one of the stockholders in the Company, represents that mine is very uniform in thickness throughout, and free from rolls and clay veins, nevertheless, the region is troubled, more or less, throughout, with rolls and clay veins in the coal. The commission feel greatly indebted to James R. Cammeron, manager and mining engineer of the Kittanning Coal Company, to John Whitehead, manager of the Ocean mine, to Mr. Gold, master miner at the Perin mine, and to Mr. Fraser, mining engineer, for courtesies. The commission left here on the four P. M. train for Tyrone, where they remained over night, taking the morning train for Cumberland, where they arrived on Saturday, P. M., and adjourned to give time to make up the journal, and to obtain such other information as was necessary for the accomplishment of the object in view.

Wednesday, October 15th, 1879.

The commission met at Lonaconing, this A. M. for consultation as to their future course, when it was decided to give the miners an audience at Lonaconing, on Wednesday, the 22d inst., and at Frostburg on the 23d inst., and to give notice to that effect by publication in two newspapers published in Cumberland, and the "Frostburg Mining Journal," published at Frostburg. It was also decided

that two public Halls be rented, one in Lonaconing and one in Frostburg, to enable the commission to give the audience above referred to.

The commission adjourned to meet in Cumberland. Thursday morning at nine o'clock, to confer with the Consolidation Coal Company, in reference to weights and such other questions consistent with the duties of the commission.

Thursday, October 16th, 1879.

Pursuant to adjournment, the commission met this morning in Cumberland, and waited upon the General Superintendent of the Consolidation Coal Company, P. L. Burwell, Esq., who refused to give any information touching the shipments of other companies over their road. He did, however, furnish a statement of the coal mined and shipped from their own mines for 1878, and the first seven months of 1879. This statement, however, is deemed unsatisfactory by the commission.

Adjourned to meet at Lonaconing, on Monday, the 20th inst.

Monday, 20th October, 1879.

As per adjournment, the commission met this morning at Lonaconing for consultation.

Adjourned to meet on Wednesday afternoon, with the miners, as per public notice given through the newspapers.

Wednesday, October 22d, 1879.

Pursuant to adjournment, the commission met at Lonaconing this P. M., for the purpose of hearing what grievances, if any, the miners had to state, as well as to receive any suggestions they had to make touching their duties in connection with those of the Companies, as per due notice given by publication through the papers and by handbills. A number of miners met the commission and at once proceeded to direct the commission in the discharge of their duties, whereupon the commission stated

that they (the commission) were not present for the purpose of receiving instructions from any party or parties, but would discharge their duties in accordance with their best judgment, and if they (the miners) had any grievances, the commission would accept them in good faith and give them due consideration, whereupon a large body of the miners left the hall. In the course of fifteen or twenty minutes others came in. The commission then stated to them the object of the meeting. After a general convention, pleasantly conducted on both sides, the miners present admitted frankly that they had no grievances worthy of consideration; that the mining law, as it stood, was a failure, owing to the court having decided that section 10, referring to the delivery of timber in the mines, interfered with the right of private contract; it did not therefore give the relief they sought. The understanding, so far as the miners were concerned, was that the mission of the commission was completed as to any claims they might have. The commission adjourned to meet to-morrow, Thursday, P. M., at Frostburg, to give the miners of that end of the coal field an audience, as per notice previously given.

Thursday, October 23d, 1879.

Pursuant to adjournment, the commission met this P. M. at Frostburg, as per previous notice. The miners failing to meet, the commission adjourned to meet in Cumberland to-morrow morning.

Friday, October 24th, 1879.

As per adjournment, the commission met in Cumberland this A. M., and waited on the Consolidation Coal Company and the New Central Coal Company, being the largest shippers of coal for the years 1878 and 1879 to this date, to request them to furnish the commission a statement of the earnings of the miners for the years above named, to this date, which they have promised to furnish.

The commission adjourned to take into consideration other matters concerning their mission.

Thursday, October 30th, 1879.

The commission visited this morning the mine of the Hampshire and Baltimore Coal Company, situated in Mineral County, West Virginia. This mine is opened on the four foot vein of coal, with two parallel headings one hundred and fifty feet apart, and driven in about two thousand feet each, with a working capacity of about three hundred tons per day, which can be readily increased to any desired amount. The mine works about two and a half feet of clean coal which looks well.

The Company has shipped between fifteen and twenty thousand tons from this mine. At present they are working it for domestic purposes only. The mine is situated about one mile west of Piedmont on the line of the Baltimore & Ohio rail road, and is connected with said rail road by two incline planes, one of which is eleven hundred feet, the other nine hundred feet in length, together with a narrow guage road about one-half-mile long.

Tuesday, December 9th, 1879.

After a number of conferences with parties interested in the labor troubles, with the view of arriving at something that might aid in preventing them, if possible, in the future, the commission met this A. M., at the office of the Borden Mining Company, when an outline of a sliding scale for mining coal was discussed, in order to arrive at a price below which coal could not go. The following was taken as a basis :

Mining.....	30 cents per ton.
Other Expenses.....	20 " "
Average freight to Cumberland...	40 " "
Royalty	25 " "
Transfer at Georgetown.....	18 " "
Canal Tolls.....	45 " "
Canal Freight.....	75 " "

\$2.53 at Georgetown.

When coal sells in Georgetown for

\$2,53,	mining to be	30 cents	per ton.
2,63,	"	33	"
2,73,	"	36 3	"
2,83,	"	40	"
2,93,	"	44	"
3,03,	"	48 4	"
3,13,	"	53 $\frac{1}{4}$	"

Taking the same basis for Baltimore, say,

Mining.....	30 cents per ton.
Other Expenses.....	20 " "
Freight to Cumberland.....	40 " "
Royalty.....	25 " "
Transfer at Baltimore.....	18 " "
B. & O. R. R., freight as now....	1.54 " "

\$2.87

When coal sells at Baltimore for

\$2,87,	mining to be	30 cents	per ton.
2,97,	"	33	"
3,07,	"	36 3	"
3,17,	"	40	"
3,27,	"	44	"
3,37,	"	48 4	"
3,47,	"	53 $\frac{1}{4}$	"

and so on until it reaches a maximum price to be agreed upon when the rate per cent advance is to be reduced, and B. & O. R. freight being at \$1.54 per ton as now. In addition to the labor troubles the question of weights was discussed. The point raised was as to the difference between weighing and measuring, when the conclusions were arrived at. With regard to weighing and measuring coal from the mines, of course, either method is right and just if honestly done, but if there is a disposition to defraud the miner, or to make him give more than a ton of coal for a ton's wages, the weighing system affords facilities for such fraud which measurement does not. No miner can be sure that the scales are right, or that they are honestly used, but he cannot be deceived in measurement, for he has the power and opportunity to test it himself in every load he digs.

The commission adjourned to meet to-morrow morning

Wednesday, December 10th, 1879.

Pursuant to adjournment, the commission met this A. M., at the mine of the Grant Coal Company. This mine is opened on the six foot vein of coal, by a tunnel driven across the metals a distance of two thousand feet, at which point they have reached the coal. When the commission formerly made a tour of the mines, this company had not reached the coal vein. The mine is connected with the Eckhart branch of the C. & P., rail road by a tramroad a fraction over a mile in length. The improvements at this mine are not yet completed, the company, however, expect to be ready to ship coal by the last of January next. The mine is situated about midway between Clarysville and Pompey Smash, about ten miles from Cumberland.

Monday, December 15th, 1879.

On Friday the 24th of October last, the commission met in Cumberland, and requested the Consolidation Coal Company and the New Central Coal Company, to furnish each a statement of the earnings of the miners for the year 1878 and for 1879 to that date. Each of them promised, very promptly, a compliance with the request, but up to this date the commission has not received any information whatever touching this subject, nor is it at all likely that there will be any furnished. It may be proper to remark in this connection, that the Companies throughout the region have not manifested any disposition, whatever, to furnish any information outside of the working and ventilation of the mines.

Monday, January 5th, 1880.

The commission received this A. M., a communication from the New Central Coal Company, accompanied with a statement of the earnings of their miners for the year 1878, and to the 31st day of August, 1879. showing the following result:

The average number of days made by their miners for 1878, was 210 days, average earnings per day \$1.96, aver-

aging for the year, \$411,60, per man. For the first seven months of 1879, the average number of days made was 131, average earnings per day \$1,83; average earnings for the seven months, \$239,73 per man.

Friday, January 9th, 1880.

The commission met this day at Frostburg, to consider the various topics set forth in the journal, and to formulate a report of the commission's work and conclusions for submission to the Governor.

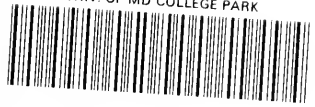
After a full consideration of the topics referred to, the journal was approved and report adopted.

By Order of the Commission,

C. H. HAMILL, Secretary.



UNIV. OF MD COLLEGE PARK



3 1430 03833081 9



DEC 75



N. MANCHESTER,
INDIANA

